Report for 2003DE28B: Undergraduate Internship: Nanticoke Watershed Total Maximum Daily Load Project

- Water Resources Research Institute Reports:
  - Neimeister, Mark, A. Scott Andres, 2004, Nanticoke Watershed Total Maximum Daily Load Project, Delaware Water Resources Center, University of Delaware, Newark, Delaware, 14 pages.

Report Follows

Undergraduate Internship Project #9 of 10 for FY03

The project is co-sponsored by the ***Delaware Geological Survey (DGS) and DWRC***. Mr. Neimeister is collecting and statistically evaluating water samples with the goal of developing improved methods for computing watershed pollutant loads.

"The Nanticoke River watershed is ranked as one of the top priority Delaware watersheds needing evaluation of the amount of pollution it can handle before significant environmental damage takes place. My analysis of baseflow, stormflow, and ground water samples will help evaluate ways to improve pollution measurements."
-- Mark Neimeister, University of Delaware undergraduate senior, Geography major.

Abstract:

This report included various topics relating to water quality and the Nanticoke drainage basin. In addition to the Nanticoke near Bridgeville, Delaware sub-watershed, four new delineated watersheds were established. Areas of potential recharge conditions such as high runoff were then identified within the five basins.

The major research done in the study concerned the water quality of the Nanticoke River, collected near Bridgeville. Two studies of various lengths were evaluated and processed. In order to complete the study, the collection of precipitation and stream discharge records, along with the separation of baseflow, was necessary. Pollutants such as NO_3 and PO_4, in particular, emphasized the high load values seen in the Nanticoke waters. This report was done to improve the methods of monitoring pollution by analyzing baseflow, stormflow, and ground water samples.